

acid molecule codes for a LAGE-1 tumor associated polypeptide, and wherein the high stringency hybridization conditions are hybridization at 65°C in hybridization buffer (3.5 x SSC, 0.02% Ficoll, 0.02% polyvinyl pyrrolidone, 0.02% Bovine Serum Albumin, 25mM NaH₂PO₄ (pH 7), 0.5% SDS, 2mM EDTA), wherein SSC is 0.15M sodium chloride/0.015M sodium citrate, pH 7; SDS is sodium dodecyl sulphate; and EDTA is ethylenediaminetetracetic acid, or hybridization at 65°C in 3.5X SSC, 1X Denhardt's, 0.5% SDS, EDTA (2 mM), Na₂PO₄ (25 mM) and salmon sperm DNA (100 µg/ml),

(b) nucleic acid molecules that differ from the nucleic acid molecules of (a) in codon sequence due to the degeneracy of the genetic code, and

(c) complete complements of (a) and (b), wherein the isolated nucleic acid molecule excludes nucleic acid molecules having the nucleotide sequence of SEQ ID NO:8.

38. (twice amended) A method for diagnosing cancer, comprising:

contacting a biological sample isolated from a subject with an agent that hybridizes under high stringency hybridization conditions to the isolated nucleic acid molecule of claim 1, wherein the high stringency conditions are hybridization at 65°C in hybridization buffer (3.5 x SSC, 0.02% Ficoll, 0.02% polyvinyl pyrrolidone, 0.02% Bovine Serum Albumin, 25mM NaH₂PO₄ (pH 7), 0.5% SDS, 2mM EDTA), wherein SSC is 0.15M sodium chloride/0.015M sodium citrate, pH 7; SDS is sodium dodecyl sulphate; and EDTA is ethylenediaminetetracetic acid; or hybridization at 58°C in hybridization buffer containing 10mM TRIS (pH8.8), 50mM KCl and 1.5mM MgCl₂, or hybridization at 65°C in 3.5X SSC, 1X Denhardt's, 0.5% SDS, EDTA (2 mM), Na₂PO₄ (25 mM) and salmon sperm DNA (100 µg/ml) and

determining expression of the nucleic acid molecule in the sample, wherein the expression of the nucleic acid molecule is diagnostic for the presence of cancer in the subject.

53. (twice amended) A composition that induces an immune response comprising the nucleic acid of claim 1 encoding LAGE-1 or an immunogenic fragment thereof.